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SCHOOLHOUSE MEETING

Conveniences and Labor Saving Devices for the Farm Home

Prepared by

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OF THE UNIVERSITY OF TEXAS

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The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.

Sam Houston.

Cultivated mind is the guardian genius of democracy. . . . It is the only dictator that freemen acknowledge and the only security that freemen desire.

Mirabeau B. Lamar.

Fellow Teacher and Fellow Citizens:

The progressive farmer no longer cuts his grain with a cradle or does all his cultivating with hoes and old-fashioned plows; he has better and more efficient implements for his work. The new farm machinery lightens his labor and increases his crop. How about the farmer's wife? Does she have her labor lightened? Are her important duties of housekeeper and mother made easier, and is her efficiency increased by improved household equipment?

Not long ago the Smith-Lever Bill was passed by Congress, appropriating funds for carrying on extension work in Agriculture, including the work in the farm home. In order to learn how to wisely spend that part of the money which was to be used for the farm home, the United States Department of Agriculture sent 55,000 letters to representative farm homes of the United States asking for suggestions from farm women as to their greatest needs and the best methods of supplying them. Only 2,241 answers were received. Among the suggestions given in these answers were such as these: "provide for farm women better opportunities for domestic science education," "publish more literature and bulletins on home sanitation and health," "send demonstrators to teach right ways of preparing foods"; but most frequent of all was the suggestion, "show us some way to do our home work better and without such an unceasing round of back-breaking water-toting, washing, cooking and cleaning up from before day till after dark."

Undoubtedly the farm home has not had its share of the money spent for improvements on the farm. Improvements in the home are usually put off until a time when money will be abundant, but the days, months, and years drag by, and no such time ever comes. Frequently when the spare cash has come, it has been invested in additional land, which necessitated more help and increased still further the wife's burdens without providing her with any of the conveniences that lessen her physical drudgery and give her some spare time to make her home life attractive and to train up her children properly. It is not only just, but good business ecenomy, that the housewife

should have just as good modern equipment of labor saving devices for her work indoors as the farmer has for his work outside, because upon the proper keeping of the home depend the health, strength and happiness of those who work in the fields. The good home means able-bodied, intelligent workers and well managed farms. Money spent in the home for increasing its convenience and efficiency is not a luxury but a well placed investment.

One of the chief causes of the apparent selfishness and inconsiderateness of really good men in allowing their wives to wear out their lives hoisting and carrying water and working without modern conveniences in the homes is the fact that these men do not realize that this labor can be avoided or greatly reduced by the wise expenditure of a comparatively small sum of money. Very few men or women know what conveniences and labor saving devices are possible at small expense in the farm home. The purpose of this discussion is to show what some of these possibilities are and how the conveniences can be secured at the least cost. This discussion is important not only for every farm woman, but for every farmer who loves his wife and values her own and his own health, efficiency and happiness. The vast majority of farm women are run down and not well a good part of their lives. This is unnecessary. Let us learn how to prevent it.

A. Caswell Ellis,
Acting Director, Department of Extension,
The University of Texas.

Conveniences and Labor Saving Devices for the Farm Home

QUESTIONS

1. Study the diagram shown of a model arrangement of the equipment in a kitchen with the view of saving steps or saving labor in the work there, and compare the steps required to cook a meal in this properly arranged kitchen with the steps required in your kitchen as at present arranged. What principles of arrangement should be followed in locating the equipment in a kitchen? Make the plan for a better arrangement of the equipment in your kitchen to save labor there. (In doing this take each actual operation, such as making and cooking biscuit, and count the steps required in each kitchen to get the materials out, mix them, put them in the stove, and carry to the table.)

2. Figure out the number of miles you walk and the number of pounds you lift in carrying water each week. How can running water most easily be put into a country home? What is the cost of each of the less expensive ways of providing running water? What provision should be made for the removal of this water?

3. What is the necessity of an oil stove in an economically equipped country kitchen? Discuss advantages and disadvantages of the particular kind you own.

4. How has the fireless cooker been a benefit as a labor saving device in your home? Give ways of making one at home, and sugestions for its use.

5. What provisions can be made in the kitchen that will reduce the hard scrubbing, and continual standing required?

6. What economy and benefit is there in having the house well screened and the fly and mosquito excluded?

7. In what ways is the bathroom, or some definite place for the bathing eqnipment, essential to the convenient home? Dis-

cuss ways of installing a cheap bathroom. Study diagram sent with this lesson.

8. In what ways does an inconvenient toilet injure health? How could a running water toilet be put into your home? If this is not possible, how is a sanitary dry toilet made?

9. What other things should be considered in a discussion of a convenient home?

ANSWERS TO QUESTIONS

No. 1. Little attention has been given in the home to the possibility of reducing the labor connected with household duties. The equipment in many of our kitchens stands just where it did thirty years ago, and, because of poor arrangement, makes needless daily demands on the housekeeper's time. It has been figured out for one kitchen just how many miles during the year the housekeeper must walk to prepare a breakfast of fruit, cereal, soft-cooked eggs, toast, and coffee. According to the figures, she would walk about fourteen miles. The kitchen has been re-arranged, and the equipment so placed as to reduce the amount of walking required to only seven miles—just half.

(Draw the two diagrams below on the board before the meeting opens. Also get a similar plan of some local kitchen drawn on the board and show how a better arrangement can lessen the labor in doing the kitchen work.)

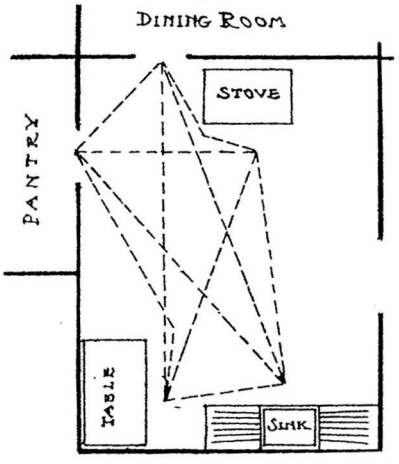


FIG. 1.

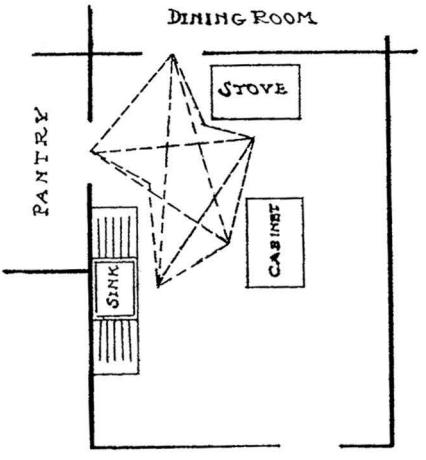
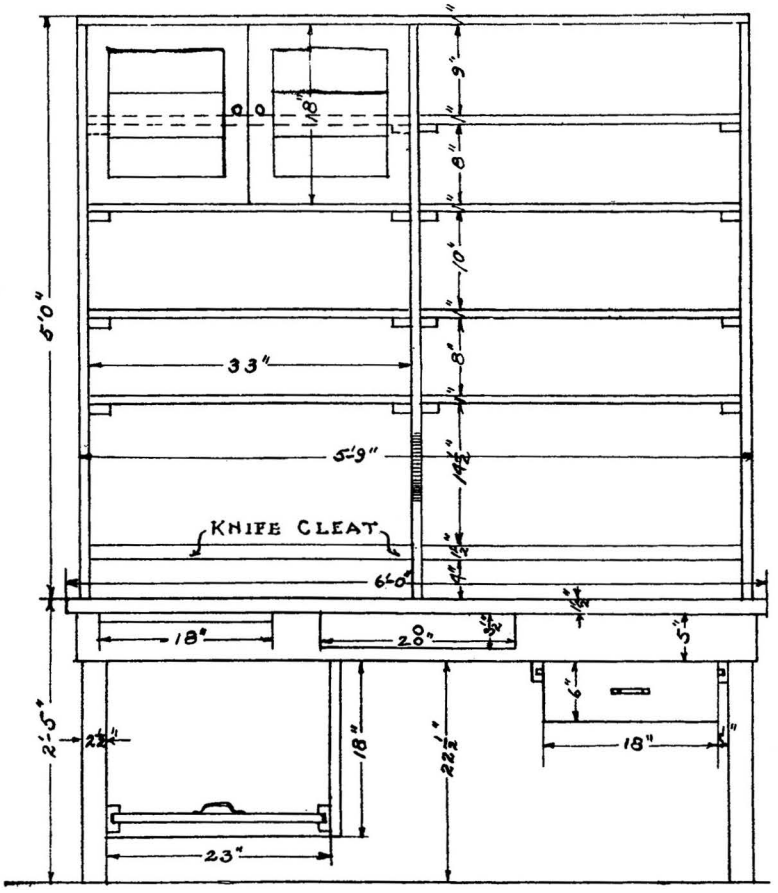


FIG. 2.

Figure No. 1 shows a poorly arranged kitchen. The stationary furnishings in this kitchen, which are essential to doing the daily tasks, are not conveniently grouped. The stove, sink, and work table should be placed near each other. The kitchen in

Figure No. 2 indicates a rearrangement to meet this requirement. Also the table has been built into a kitchen cabinet. (For Figures 1 and 2 we are indebted to Circular No. 8 of the Extension Department of the University of Virginia.)

The kitchen cabinet is essential, in order that the staple supplies used daily in the preparation of food, and the utensils necessary for this preparation be grouped together. A very inexpensive and convenient cabinet can be made from any kitchen table with shelves or cupboard placed above. The accompanying diagrams, figures 3 and 4, show front and side view of such a cabinet.



FRONT VIEW OF TABLE & CUPBOARD

Fig. 3.—Home made kitchen cabinet, front view.

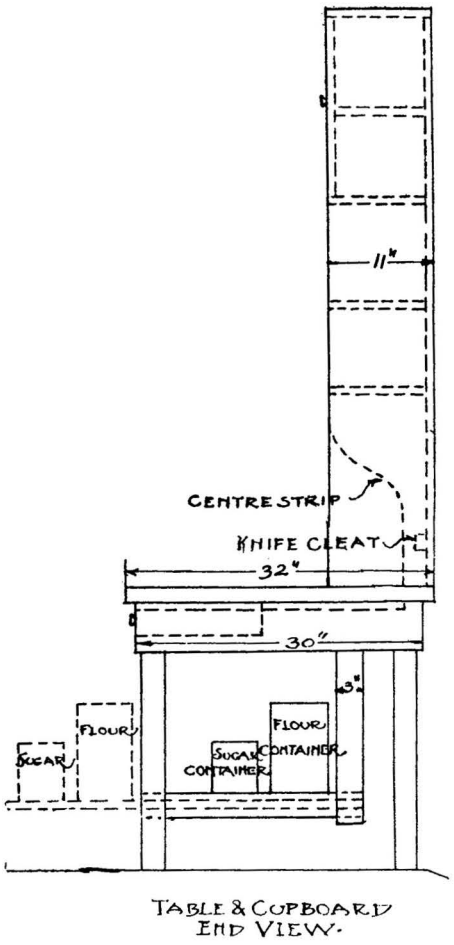


Fig. 4.—Home made kitchen cabinet, side view.

In this cabinet, the flour and sugar can be kept in large lard buckets or stone crocks on the sliding shelf at the left under the table. The small equipment, such as egg beater, strainer, etc., can be placed in the drawer or hung from the bottom of the shelf at the back of the table. Also, the small saucepans and skillet used daily can be hung at the back of the cabinet. Tight, small containers for tea, coffee, rice, baking powder, etc., can be kept on the open shelves. Package

foods, bowls, pans, etc., con be kept in the upper closet. The knives can be kept in the knife-cleat or the drawer.

Such a cabinet can easily be made in the home by any man handy with tools at a small cost. It greatly reduces the labor in the preparation of the every day meals.

No. 2. Undoubtedly, one of the greatest needs in the farm home is running water. The government has recently published figures which show that many housewives travel from one to two miles a day just to bring in water. The government reports also state that the average farm woman who has no running water in her kitchen lifts during the day in bringing in the water, filling the teakettle, removing the water, and so forth, from 700 to 2,000 pounds of water a day. Is it any wonder that the housewives give out?

Every kitchen should have, at least, a sink and drain; and, if possible, running water. The water can be supplied from a small hand pump. The sink need not be an expensive one, but should be of material which does not absorb grease. The sink should have an iron drain pipe leading from it, through which the water can be carried away. The drain pipe should be arranged to empty its contents into a set of drain tiles laid with open joints near the surface of the ground; or be so arranged that the water can be discharged at different times in distinctly different places to prevent excess of water in any one spot. In any system the water must not be allowed to gather in pools about the drain pipe so as to breed mosquitoes. This is not an expensive outfit. See figure 5. The estimated cost is as follows:

Pump—$2.00 up, depending on quality and depth of well.

Sink—$3.25 up.

Pipe and tile—$2.00 to $5.00, depending on distance from sink.

Labor of installing—Nothing. (Done at home.)

The running water for the sink may be supplied from an elevated tank, which is filled by a windmill or gasoline engine. A complete equipment including tank, engine, pump, fittings, etc., can be purchased for $126.00. This is a much more efficient system. The same engine may be used also for sawing wood, running the separater or small feed mill, and thus be of

service both to the farm and home. (See "Low Cost Farm Waterworks" in "Country Gentleman," July 11, 1915. This will be sent free to anyone upon request to the University Department of Extension.) If the above plan is not possible, a cistern or large barrel could be elevated outside the kitchen with a pipe leading from it to the kitchen sink. This tank or barrel should be kept filled by the men with a hand force pump

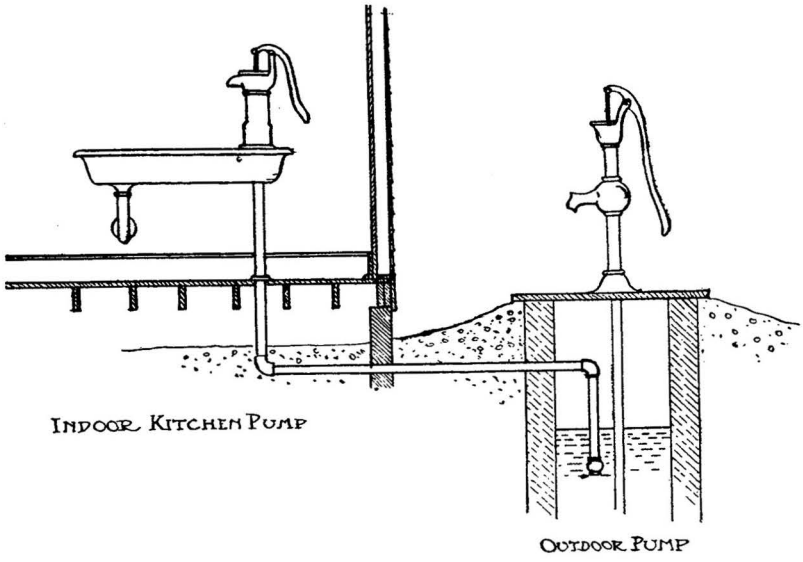


Fig. 5. Simplest arrangement for having water supply in kitchen.

or by some mechanical power. Such a plan can be carried out at little expense besides a few feet of pipe and the labor of cutting the poles and building the frame to hold the barrel. Some system of running water should be provided in every farm home.

No. 3. In a climate where hot weather lasts from six to eight months in the year, some form of gasoline or kerosene stove should be provided even in the country where wood is free and the kitchen is already equipped with a wood stove. A kerosene or gasoline stove is quickly regulated, does not heat the kitchen as a wood stove does, and relieves the housewife from the nervous exhaustion following a day's work in an overheated kitchen.

These stoves are simple to manipulate and not expensive to run. The kerosene stove is perfectly safe, and the cost of fuel is less than the gasoline, as a gallon of kerosene at 12c and a gallon of gasoline at 20c furnish practically the same amount of heat.

The fireless cooker is especially adapted for those foods which require a long slow cooking, such as cereals and tough meats.

The following is a description of a homemade fireless cooker and a cut showing its construction. Suggestions for its use are found in Bulletin No. 347, "Meat, Its Preparation and Value in the Diet." This Bulletin may be obtained by writing to the Department of Extension, University of Texas, Austin, Texas.

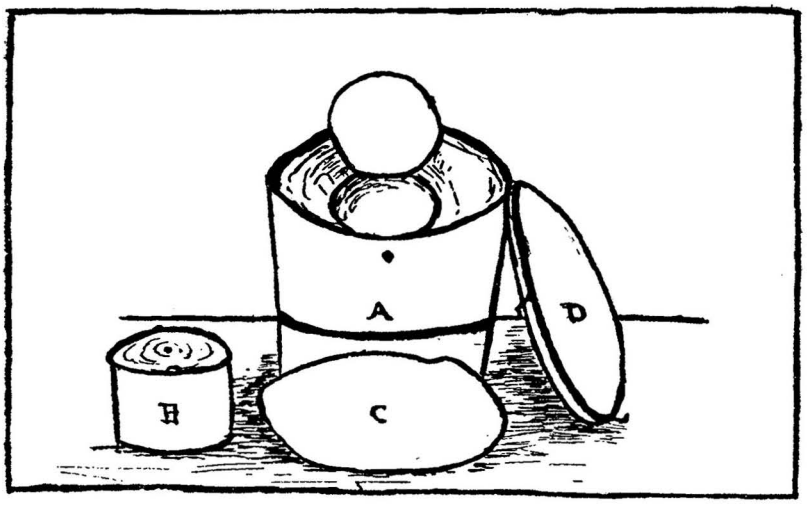


Fig. 6. Home made fireless cooker; cost 45 cents.

A.—Candy bucket.
B.—Pail.
C.—Cushion.
D.—Cover.

This home-made fireless cooker was made at a cost of fifty-four cents. The materials necessary are: (1) One candy bucket; (2) one-quart granite pail; excelsior or hay; newspaper; heavy domestic or canvas; asbestos mat; hooks and screweyes.

See that the bucket is perfectly clean and line the sides and bottom with several thicknesses of newspaper. In the bottom pack about four inches of excelsior or finely chopped hay as

hard as it can be packed. Place the granite pail on top of this packing in the center of the bucket, and pack excelsior or hay all around it. When this is done, pull the pail out of the hay or excelsior carefully, leaving a hole the size of the bucket. Make a lining for the opening left, using the cloth for this purpose. At the bottom of the hole fit a piece of asbestos. This will help to keep the heat from escaping. Next make a cloth covered pad of newspaper and excelsior to fit the top of the bucket, cover the pail and hold in the heat. Make a wooden top also to fit snugly over the bucket. This helps to prevent the cold air from entering the bucket and the heat from escaping. Arrange screweyes on the lid and hooks on the bucket with which to hold the lid in place.

No. 4. The floor should be covered with a material which is impervious to moisture and grease. A good grade of linoleum is the best. This will not require scrubbing, but mopping only. If it is not possible to obtain linoleum, the floor may be oiled. For this finish, the floor should first be thoroughly cleaned, then treated with boiled linseed oil and paraffin. The paraffin is melted in the oil, and the mixture applied, boiling hot, by means of a brush. It is then thoroughly rubbed in. At first it is best to put on two coats. This finish is durable and inexpensive, and makes the floor much better looking and easier to clean. The material for an ordinary kitchen floor would cost about a dollar. Anyone can put it on. The best proportions are 1 gallon of oil to 1 pound of paraffin.

A stool in the kitchen of a height which will enable the worker to sit at the table, sink, or stove while working, and light enough in weight to be easily carried from one place to another, will save many an hour's continued standing and many a back-ache. This costs less than a dollar.

No. 6. The fly and mosquito are disease carriers. The fly spreads typhoid fever, cholera infantum, dysentery, and many other filthy diseases. It lives mainly on fluid or semi-fluid foods, some of which are most dangerous to human health. Thus, flies may sip up the spittle of a person ill with consumption, in which are the germs by which that disease is spread from one person to another; they may feed on the waste water and night soil from sick room or privy, and so become fouled with the fluids

containing the germs of typhoid fever, or dysentery. Then they visit our homes, crawl over the food which we are about to eat, leaving a trail of disease germs as they go, and infect the milk and the fluids we are about to drink. In this way, they often spread abroad the most serious diseases.

The mosquitoes are responsible for malaria. All malarial fever is transmitted from man to man by mosquitoes, and by mosquitoes alone. It is transmitted by the female of one particular variety of mosquito, the Anopheles. Others may be troublesome, but are not known to transmit malaria. Mosquitoes become infected with malarial organisms by biting infected human beings. After passing through several stages in the stomach of the mosquito, this infection may be transmitted to other human beings bitten by one of these infected mosquitoes.

From this it will be seen that flies and mosquitoes are a constant source of danger, and if they cannot be exterminated, they must be excluded from the home by screening the doors, windows, and chimneys.

The most satisfactory and permanent method of screening is the framed wire screens, made to fit the different windows and doors. A less expensive method is to tack mosquito netting or mosquito wire over the outside of each of the window frames and add screen doors to each door. One East Texas family spent less than five dollars screening their home in this way, at the suggestion of the University Extension Department, and stated that throughout that entire year they did not have a doctor in the house; whereas, for twenty-one years before not a month had passed without having sickness in the family and doctor's bills.

In screening, three things should be especially looked out for, or the work will be almost useless, as far as mosquitoes are concerned:

1. Do not use a netting with less than 16 meshes to the inch. A great deal of 14 mesh wire is sold. This will not keep out small mosquitoes.

2. Be sure that the frames fit the door and window openings so closely that space is not left for the entrance of mosquitoes.

3. In the warm weather, be sure to stop up the chimney flues

or put a mosquito net frame over them, as mosquitoes will come down unused chimneys.

More than half the sickness could be banished from the farms of Texas by properly screening the houses, protecting the water supply, and providing sanitary toilets, all of which can be done

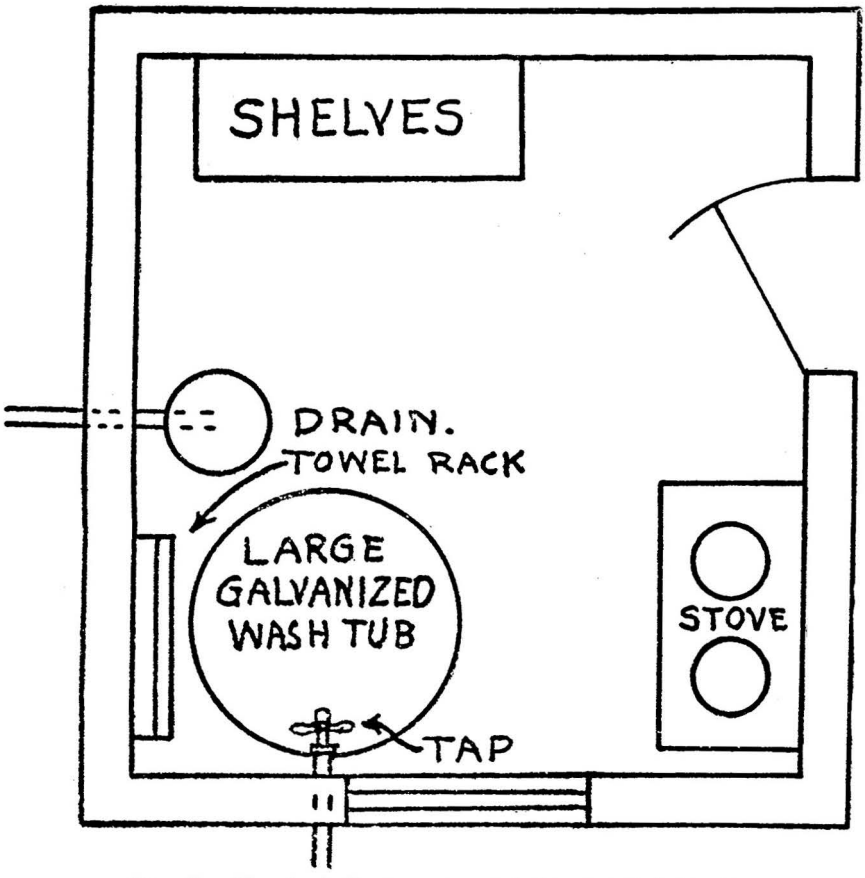


Fig. 7. Simple bath arrangement for a rural home.

at small expense. Sickness in the family is one of the heaviest burdens the housewife carries.

No. 8. Personal cleanliness is not a fad or a fancy, but a sanitary necessity. The housewife that provides only a wash basin and towel back of the kitchen stove or on the back gallery,

and expects her family to keep clean with this arrangement, is failing in her responsibility for safeguarding the health and efficiency of the family. Such an arrangement gives no privacy, no provision for an entire bath, and affords a splendid opportunity for the spread of disease through the common towel and bowl. It is a neglected child who comes in from muscular exercises, covered with perspiration, and puts on clean out-side garments without changing the heated underwear or bathing the dirt and waste products from the skin. There are many simple arrangements for the bath room in the farm home. An inexpensive arrangement such as the following can easily be installed: Take some small room of the house, fit it with a large galvanized wash tub, run in above the tub a water pipe or connect a small pump with the wall, and arrange if possible some convenience for the removal of the wash water. A hopper with a pipe running out under the ground could be used or a pipe leading to a ditch through which the water would run down to the garden or flower bed. For cold weather the room should be fitted with a kerosene stove for the purpose of heating both the water and the room. Such an outfit would cost ,as follows:

Tub—$1.25.	Pump—$1.95.
Oil stove—$3.50.	Pipe—10c per foot.

This would add greatly to the comfort, cleanliness and health of the family. See diagram Figure No. 6.

A more satisfactory bath room arrangement would be to purchase a regular bath-tub. The bath-tub is better shaped than the wash-tub, holds more water, and can be more easily emptied. Reliable firms advertise an entire bath-room outfit of white porcelain enamel consisting of a lavatory, tub and closet for thirty-eight dollars and a half. A good white enameled steel tub can be obtained for five dollars, and a white porcelain enamel rolled rim tub for $11.50.

One family, where there was no room available in the house for a bath-room, fitted up a crude shed not far away from the house. They laid a wooden floor, put in a big galvanized wash tub, a little kerosene stove, and piped the water in from the well. There are many ingenious ways in which one can arrange a simple shower bath for the farm. For further information

write for The University of Texas Bulletin No. 305, on Cleanliness and Health.

No. 9. The toilet is a very necessary consideration for the convenient home. The insanitary, unscreened toilet is often the means of distributing diseases, especially typhoid and dysentery; and the poorly kept toilet, placed at some distance from the home is often responsible, particularly with children, for the lack of regularity in attending to the calls of nature, which leads to chronic constipation and thus to many other ills.

The flush toilet can easily and cheaply be installed in the home where there is already running water for the bath. However, a septic tank, or closed cess-pool is essential for the care of the waste. When installed, such a system greatly reduces the labor of the housekeeper.

Where the outside toilet must be used have a good, screened, sanitary, dry toilet. If emptied frequently, and ashes or lime is used daily in the vault, there is no reason why this toilet could not stand near, or in direct connection with the house. Such a toilet must be screened to exclude flies from the vault; must provide a tight receptacle to hold all the waste matter and prevent it from polluting the soil; and must be so constructed as to be easily cleaned. These requirements are essential as the human waste may contain disease germs, especially the germs which cause typhoid, hookworm, dysentery, and intestinal tuberculosis. If the flies are not excluded they breed in the privy filth and spread its diseases. Where the soil is allowed to become contaminated with the human waste, the disease germs may find their way into the drinking water, or the children or any barefooted person become infected with hookworm directly from the soil. The following cuts show the construction of the dry toilet as suggested by the United States Department of Agriculture, Farmers' Bulletin No. 78. The lumber for this toilet costs from five to ten dollars, depending on the locality. Every family that does not have running water and a septic tank should order one of these bulletins and follow the directions given there for making a sanitary dry toilet.

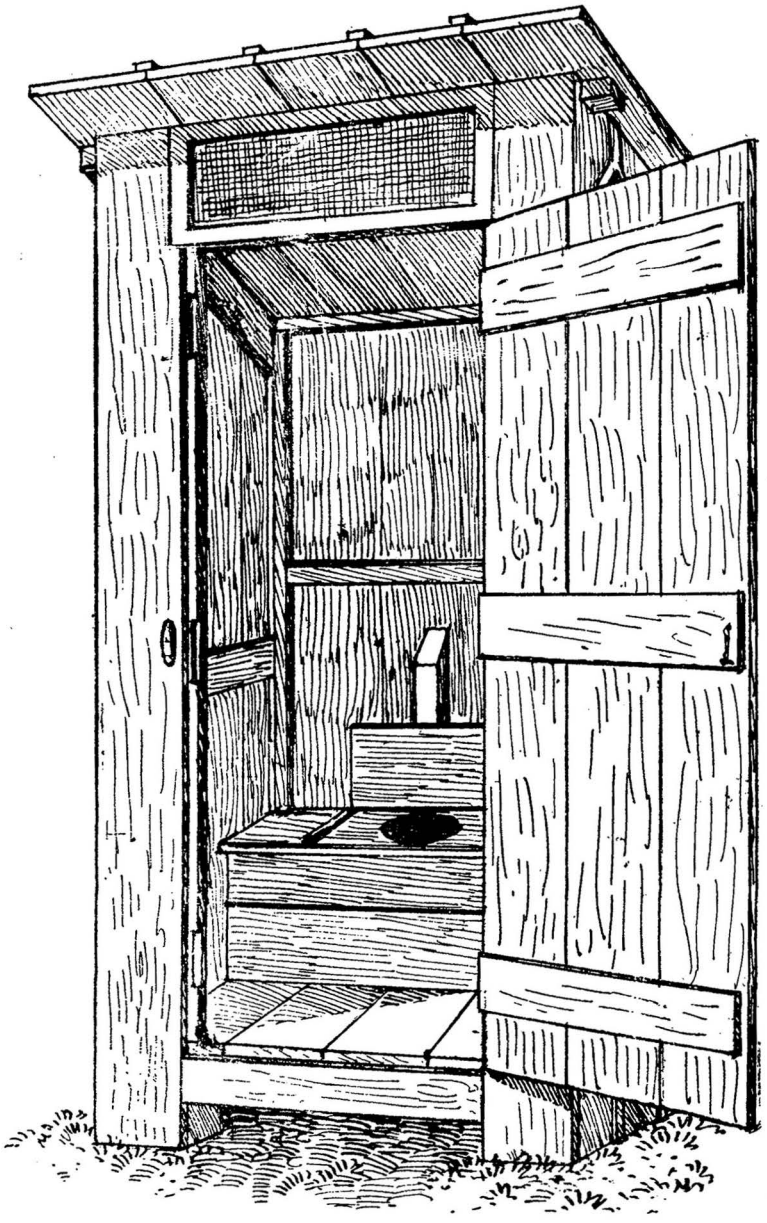


FIG. 8—SANITARY DRY TOILET
FRONT VIEW

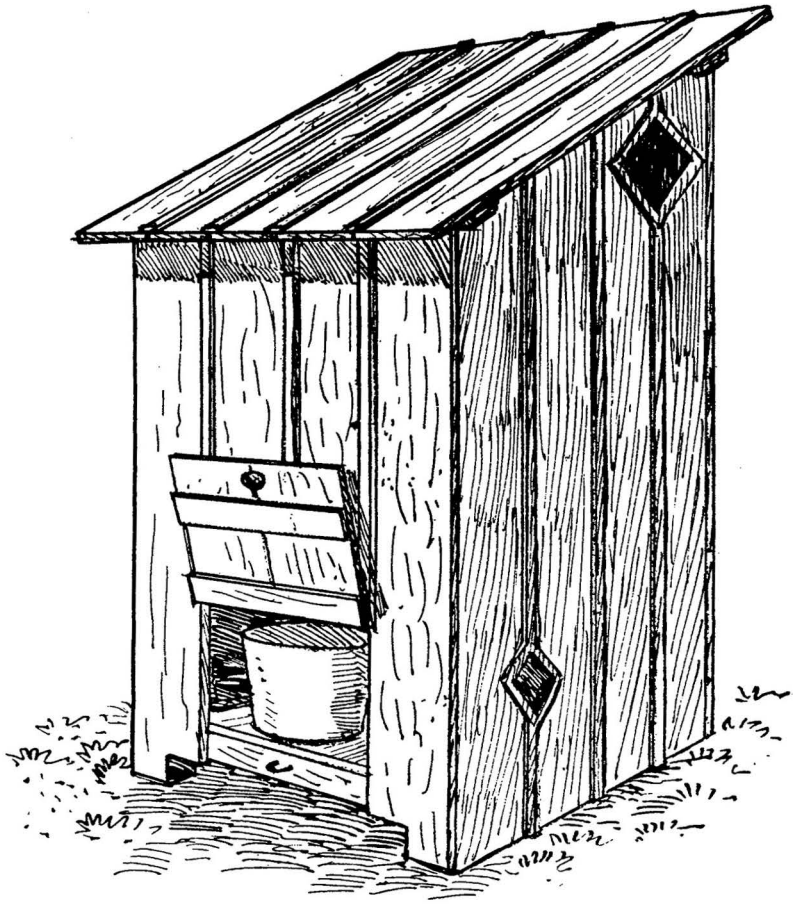


FIG. 9—SANITARY DRY TOILET.

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